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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/716,373

11/18/2003

Enrico Alessi

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GARDERE WYNNE SEWELL LLP
INTELLECTUAL PROPERTY SECTION
3000 THANKSGIVING TOWER
1601 ELM ST
DALLAS, TX 75201-4761

EXAMINER

AKHAVANNIK, HADI

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

10/03/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/716,373	Applicant(s) ALESSI ET AL.	
	Examiner HADI AKHAVANNIK	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16 is/are allowed.
- 6) ☒ Claim(s) 17-23 and 25-28 is/are rejected.
- 7) ☒ Claim(s) 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 7/14/08 has been entered.

Response to Arguments

Applicant's arguments filed 7/14/08 with respect to claims 1-16 are persuasive. Therefore, those claims are now allowable.

Applicant's arguments with respect to claims 17-23 and 25-28 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2624

1. Claims 17-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gardes et al. (6901168, referred to as "Gardes" herein) in view of Shiau (6185328).

Regarding claim 17, Gardes discloses a method of identification of the pixels of an image belonging to a same object on a background, comprising: scanning the pixels of said image; calculating a characteristic value for each scanned pixel by a fuzzy logic algorithm having as antecedents: the grey level of the pixel, the distance between said grey level of the pixel and the mean grey level of background pixels, and the square of said distance; calculating the mean value of grey level of the background pixels; and defining a pixel as belonging to a same object if said characteristic value exceeds a preestablished threshold (see columns 7-8 which discloses finding the mean and variance of the grey level for the pixels in order to classify).

Gardes does not explicitly disclose using fuzzy logic for segmenting the pixels.

Shiau discloses this feature in column 15 lines 33-67, which discloses using fuzzy logic algorithm to check pixels values against a threshold and segmenting each pixel.

It would have been obvious at the time of the invention to one of ordinary skill in the art to include Gardes the fuzzy segmentation means as taught by Shiau. The reason for the combination is because it makes for a more robust system that is able to segment pixels using a fuzzy logic classifier based on thresholds.

Art Unit: 2624

Regarding claims 18-20, please see Gardes column 9 lines 1-68 which discloses multiple Gaussian membership classes and consequents.

Regarding claim 21, please see the rejection of claim 17 as it discloses claim 17.

Regarding claim 23, Gardes discloses defining by said preset criterion for each spot a first zone containing signal pixels and a second zone containing background and/or noise pixels (Gardes does this by establishing a true signal with the least amount of variance and the false signal with greatest amount of variance as taught in column 8 lines 46-65 discloses finding the variance).

2. Claim 22 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gardes in view of Shiau in further view of Alessi et al. (article titled "A New Clustering Based System For Automated Object Recognition", referred to as "Alessi" herein).

Regarding claim 22, the rejection of claim 17 discloses all aspects of claim 22 except for the specific clustering steps.

Alessi discloses these clustering steps in figure 2 and section titled "General System Description".

It would have been obvious at the time of the invention to one of ordinary skill in the art to combine in Gardes and Shiau the specifics of the clustering as taught by Alessi. The reason for the combination is because this is a standard clustering sequence that many grouping algorithms use.

Art Unit: 2624

Regarding claim 25 please see the rejection of claims 17 and 22 above as it discloses all aspects of claim 25.

Regarding claims 26-28 please see the rejection of claims 17 and 22 above as it discloses all aspects of claims 26-28.

Allowable Subject Matter

3. Claim 24 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claims 1-16 are allowed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kennealy (5764792) discloses a grey level image segmentation method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HADI AKHAVANNIK whose telephone number is (571)272-8622. The examiner can normally be reached on 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2624

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jingge Wu/
Supervisory Patent Examiner, Art Unit 2624

HA
9/29/08